

Appl. No. 10/698,988  
Amdt. Dated February 13, 2006

Attorney Docket No.: NSL-014  
Reply to Office Action of November 18, 2005

## REMARKS:

### INTERVIEW SUMMARY

In an interview on January 12, 2006 with Attorneys Joshua D. Isenberg and Hao Y. Tung and inventor Brian M. Sager the Examiner and his supervisor Harold Pyon discussed proposed amendments to claim 12 intended to overcome previously cited US Patent 6,472,467 to Chiao. Although agreement was not reached as to amendments to the claims that would make them allowable, the Examiners indicated that amendments to claim 12 clearly specifying that layers consisting of organic polymer material are covalently bonded to adjacent layers of inorganic material would distinguish over the prior art of record. Furthermore, Examiner Pyon indicated that the covalent bonding of layers of the organic polymer material to adjacent layers of inorganic material is a critical feature that produces an unexpected result.

### AMENDMENTS TO THE CLAIMS

To expedite prosecution and improve readability, the Applicants have amended claims 12 and 29. Support for the amendment to claim 12 can be found at FIG. 1, page 3, lines 5-22; page 6, lines 26-31; and page 7, lines 1-8. Claims 13, 18, 20, 26, 28, and 29 have been amended to conform to the language of claim 12. In response to a suggestion of Examiner Pyon, the Applicants have affirmatively recited "covalent bonds" that couple adjacent layers in claim 12. The Applicants submit that this is not new matter since it merely recites in structural terms a feature (covalent bonding) present in the claims as previously amended. New claims 31 through 33 recite the self-assembling feature. Support can be found on page 6, lines 8-31 and page 7, lines 1-8. New claim 34 has been added to recite that the layers of organic and inorganic material have different material compositions. The Applicants submit that support for this feature can be found at page 3, lines 1-22. Support for this feature can be found in the specification as filed in Figure 1 and at page 7, lines 1-4. New claim 35 characterizes the different layers in the film. Support can be found at page 3, lines 5-22. As such, no new matter has been added with these amendments.

### CLAIM OBJECTIONS

The Examiner has objected to claim 30 because the phrase "the underlying substrate" has insufficient antecedent bases. In response, the Applicants submit that claim 30 as it presently stands recites "an underlying substrate". The Applicants respectfully request withdrawal of the objection and entry of the amendment if this has not already been done.

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### CLAIM REJECTIONS

#### 35 USC 102

Claim 12 has been amended to recite that barrier film comprises a plurality of layers consisting of an organic polymer material wherein adjacent layers of the organic polymer material and  
5 inorganic material are covalently bonded to each other. Such a configuration of alternating layers is not shown or suggested in Chiao which the Examiner has characterized as having layers that are both organic and inorganic. Hence Chiao discloses multiple layers of inorganic/organic material, but none with layers consisting of an organic polymer material. As Chiao fails to show or suggest the structure recited in amended claim 12 and its dependent claims. As such claims  
10 12-35 are in condition for allowance.

Additionally, Applicants submit that the Examiner has not addressed the features of claim 29, namely that the organic polymer material layers are discrete layers of organic polymer material and that the layers of inorganic material are discrete layers of inorganic material. The Applicants  
15 submit that Chiao teaches a structure having layers of composite material, where the composite material includes both an inorganic component that is intermixed with an organic component. Not only are these components not covalently bonded to each other, Chiao's intermixed organic and inorganic materials do not form covalently bonded discrete layers as set forth in claim 29. Therefore, for at least this additional reason, the Applicants submit that claim 29 defines an  
20 invention suitable for patent protection.

#### NEW CLAIMS 31-35

The Applicants submit that new claims 31-33 depend directly from claim 12 and are allowable over the prior art and is allowable for the reasons set forth above. In addition, with respect to  
25 claims 31 through 33, the Applicant submits that Chiao does not teach or suggest that self-assembling feature shown in Chiao. In addition, with respect to claim 34, the Applicant submits that Chiao does not teach or suggest that "layers of the organic material and adjacent layers of the inorganic material have different material compositions." as set forth in claim 34. With regards to claim 35, Applicant submits that Chiao does not teach or suggest layers consisting of  
30 an inorganic material. As such, and for at least these additional reasons, the Applicants submit that claims 31-35 define an invention suitable for patent protection.

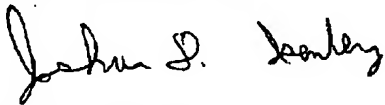
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CONCLUSION

For the reasons set forth above, the Applicants submit that all claims are allowable over the cited art and define an invention suitable for patent protection. The Applicants therefore respectfully  
5 request that the Examiner enter the amendment, reconsider the application, and issue a Notice of Allowance in the next Office Action.

Respectfully submitted,



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Date: 2/13/2006

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